

The genus *Oliva* (Mollusca: Gastropoda: Olividae) in southern Africa and Mozambique

by

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SYNOPSIS

Ten species of *Oliva* occur in Mozambique: *O. bulbosa* (Röding, 1798), *O. tremulina* Lamarck, 1811, *O. tigrina* Lamarck, 1811, *O. caroliniana* Duclos, 1835, and, recorded for the first time, *O. sidelia* Duclos, 1835, *O. paxillus* Reeve, 1850, *O. caerulea* (Röding, 1798), *O. panniculata* Duclos, 1835, and *O. annulata* (Gmelin, 1791). *O. sairousa* sp. n. is described from the Imhambane area. The ranges of five species extend into Natal, three of these being new records for South Africa.

INTRODUCTION

This paper is an attempt to throw light on the composition of the *Oliva* fauna of south-east Africa, based on the collections of the Natal Museum and supplemented by a critical survey of the literature. As a purely faunal study, no attempt is made to discuss synonymies, which are in a sufficiently confused state already.

Published records of *Oliva* from South Africa and Mozambique are sparsely scattered through the literature, and for the most part are of doubtful validity. The first *Oliva* to be recorded from South Africa was *O. truncata* Marrat, 1867, type locality 'Cape of Good Hope'; while its true identity remains controversial, the presence of bunched lines below the suture indicates this to be an American species of the *Oliva spicata-polpasta* complex.

In 1892 Sowerby recorded *Oliva caerulea* (Röding, 1798) and *O. bulbosa* (Röding, 1798) from the Bairstow collection, which was made at Port Elizabeth, well outside the range of such tropical species. Study of the S. D. Bairstow collection, preserved in the Oxford University Museum, vindicates Bairstow, but attests to the extraordinary carelessness of Sowerby, who, instead of checking the relevant labels, was content to record everything under the blanket locality 'Port Elizabeth'. In fact, Bairstow carefully annotated those specimens which he had collected himself with the words 'Algoa Bay, mihi', and in the absence of this or any other indication, his specimens must be treated as of extraneous origin. Some (such as *Vasum truncatum* Sowerby, 1892) certainly came from Transkei, and were no doubt collected by Colonel J. H. Bowker (1822–1900), but many others, the *Oliva* included, undoubtedly came from foreign sources. In 1897 Sowerby reported the tropical *Oliva ispidula* [auct. = *O. oliva* (Linne, 1758)] from 'Knysna', a totally impossible locality, and from Durban he listed *O. scitula* Marrat, 1870 [= *O. caroliniana* Duclos, 1835], which is the first valid *Oliva* record from South Africa. In 1900 he added *O. dactyliola* Duclos, 1835, collected in Pondoland by Agnes Filmer. This record has been repeated by a number of

recent authors, but the actual specimens preserved in the H. Becker collection (now in the Natal Museum) are merely faded *Oliva caroliniana*.

In 1903 E. A. Smith recorded from Durban *O. paxillus* Reeve, 1850, *O. picta* Reeve, 1850, and *O. elegans* Lamarck, 1811. Fortunately the specimens are available in the Natal Museum (Burnup collection), because the specimen identified as *elegans* proves to be *O. tigrina* Lamarck, 1811, while that recorded as *O. picta* (whatever the true identity of this taxon) is *O. sidelia* Duclos, 1835. More recently Barnard (1959), utilising the identifications of Sowerby III, has listed *O. ispidula* and *O. dactyliola*; both records are evidently based on *O. caroliniana*.

The first *Oliva* to be reported from Mozambique were collected by W. Peters in the Quirimba–Mozambique Island area. These were listed by Von Martens (1879) as *O. inflata* [= *O. bulbosa*], *O. tigrina* and *O. scripta* Lamarck, 1811. The last is a controversial species, regarded by some as Caribbean, by others as restricted to the West Pacific Arc. I have seen nothing resembling *scripta* auct. from Mozambique. A fourth species, also presumably collected by Peters, had been added by Weinkauff, 1877, who cites 'Mozambique (v. Martens)' for *O. tremulina* Lamarck, 1811. Braga (1952) recorded *O. inflata* and '*O. brasiliensis* Chemn' [= *Olivancillaria urceus* (Röding, 1798) from South America]. Finally Macnae & Kalk (1958) report *O. scitula* and *O. elegans* from Inhaca; a photograph of an Inhaca '*elegans*' given by Moura (1969a) seems to be *O. bulbosa*.

No further justification for writing the present paper seems necessary!

Key to the genus *Oliva* in southern Africa and Mozambique

- 1 Spire relatively high and conical, more than 0,33 length of body whorl, spire whorls not distinctly concave; anal canal bordered by a callus ridge; body whorl somewhat conical; aperture white, yellow or flesh..... 2
- Spire relatively low, less than 0,33 length of body whorl, often basally immersed, later spire whorls usually concave; anal canal with a well-developed callus pad; body whorl bulbous to subcylindrical; aperture white, pink or violet..... 4
- 2 Adult 35–60 mm in length; aperture flesh-colour; fasciole generally with violet spots **annulata**
- Adult not exceeding 30 mm in length; aperture white or yellowish; fasciole without violet spots 3
- 3 Aperture white; shape narrower and more cylindrical; a complex pattern of flecks or wavy lines; protoconch smaller with a larger initial whorl..... **panniculata**
- Aperture yellowish; broader and more conical; pale with a faint speckled pattern; protoconch larger with a smaller initial whorl **paxillus**
- 4 Columella callus very widely expanded at base and crossed by a very strong, oblique ridge, usually brown-tinged, with a weaker anterior one; shape usually bulbous with a conspicuous anal callus pad; labium rather straight posteriorly, gently convex anteriorly **bulbosa**
- Columella callus less expanded, and without conspicuous ridges 5

- 5 Spire completely masked by thick callus, save for the last suture; small (16–27 mm), aperture very narrow, white or pinkish **sidelia**
- Spire with an inconspicuous callus deposit, normally larger with a wider aperture 6
- 6 Anal pad large, spire conspicuously coeloconic, sunken with a mammillated apex, later whorls concave; labium usually almost smooth posteriorly 7
- Anal pad small, spire only slightly coeloconic, not mammillated, later whorls flat or slightly concave; labium transversely ridged posteriorly 9
- 7 Adult (60–90 mm in length) subcylindrical; labium evenly and gently curved; suture widely channelled, whorls very concave; aperture white or bluish **tremulina**
- Adult not exceeding 45 mm in length; ovate to ovate-cylindrical; columella markedly convex anteriorly, flattened posteriorly; suture narrowly channelled 8
- 8 Aperture violet, columella base white; shape ovate-cylindrical.... **caroliniana**
- Aperture white, columella base sometimes yellowish, shape slightly inflated posteriorly **tigrina**
- 9 Labium with feeble folds in adult; suture channelled almost to protoconch; paler **caerulea**
- Labium with 12–14 strong transverse folds; early teleoconch whorls covered by a callus glaze, exposing only the last 1½ sutures; darker **sairosa**

ZOOGEOGRAPHY

With our present knowledge, little can be deduced as to the zoogeography of the group in south-eastern Africa. Except for one possible Mozambique endemic (*O. sairousa* sp. n.), all are of Indo-West Pacific distribution. Of the latter, four do not appear to reach South African waters, and one (*O. panniculata*) is not yet known south of the coral coast of northern Mozambique, although this is probably due to inadequate sampling. Of the five species reliably known from Natal, the ranges of two (*O. caroliniana* & *paxillus*) just overlap the eastern borders of Transkei. The picture is thus of a typical tropical group, with its subtraction margin falling off sharply from Durban southwards, and its limits lying in eastern Transkei.

Oliva annulata (Gmelin, 1791)

Voluta annulata Gmelin, 1791: 3441 (type figures: Lister, 1685–91: pl. 717, fig. 1, and Martini, 1773: pl. 51, fig. 564). Type locality unknown.

Oliva annulata; Burch & Burch, 1967: 516 *et sequ.* (references and synonymy); Zeigler and Porreca, 1969: 64; pl. 13, figs 1–7.

Oliva emicator ('Meuschen'); Dautzenberg, 1927: 14 *et sequ.* (references and synonymy).

Range: Polynesia and Mauritius to southern Mozambique.

Regional locality data: NORTHERN MOZAMBIQUE: Conducia Bay, sand with coral and *Thalassodendron*, 4 ft above L.S.T. to 6 ft down (N.M. H4571–2, H4575: K. Grosch); Mozambique Bay, edge of sandbank, L.S.T. (N.M. H4573: K. Grosch); Mozambique Is (N.M. G3449: A. Enes); between Lunga and Memba Bay (N.M. H4574: K. Grosch). SOUTHERN MOZAMBIQUE: Bazaruto Is (N.M. 9939: E. Roscoe).

Oliva panniculata Duclos, 1835

Oliva panniculata Duclos, 1835: pl. 15, figs 15, 16; *idem*, 1844: 12, pl. 6, figs 15, 16; Dautzenberg, 1927: 70 (references); Burch & Burch, 1967: 520 (synonymy); Zeigler & Porreca, 1969: 76, pl. 10, figs 19, 20. Type locality: 'Madagascar' (*vide* Duclos, 1844).

Range: New Caledonia and Sri Lanka to northern Mozambique.

Regional locality data: NORTHERN MOZAMBIQUE: Conducia Bay (N.M. H4576: K. J. Grosch); between Lunga and Memba Bays (N.M. H4577: K. J. Grosch).

Remarks: Available material does not permit a definite conclusion as to the validity of *O. panniculata*. Although accepted as a sound species by all previous authors, some of the Mozambique shells approach suspiciously closely to *O. paxillus*. Only the narrower, more cylindrical body whorl, more complex colour pattern and white aperture appear to distinguish it from that, although in Mozambique examples the protoconch tends to be fractionally smaller (diameter 1,1–1,3 as against 1,4–1,5 mm in *paxillus*), and the initial whorl is slightly larger and more inflated. These characters need further investigation.

Oliva paxillus Reeve, 1850

Oliva paxillus Reeve, 1850: pl. 21, sp. 56a, b; Smith, 1903: 363; Burch & Burch, 1967: 519 (synonymy); Zeigler & Porreca, 1969: 77, pl. 10, figs 23, 24. Type locality unknown.

Range: Hawaii and Mauritius to eastern Transkei.

Regional locality data: NORTHERN MOZAMBIQUE: Porto Amelia (N.M. G3658: E. Roscoe); Memba Bay, in sand above rocky shelf, 3 ft above L.S.T. (H4579: K. Grosch); Lunga Bay, sandbank near deep water, 2 ft above L.S.T. (N.M. H4582: K. Grosch); Conducia Bay, sandbank, 1 ft above L.S.T. (N.M. H4580: K. Grosch); Mozambique Bay, sandflat above *Thalassodendron*, 1 ft above L.S.T. (N.M. H4581: K. Grosch); between Lunga and Memba Bays (N.M. H4577–8: K. Grosch). SOUTHERN MOZAMBIQUE: Bazaruto Is, dredged in 10 ft, off western sandbanks (N.M. G6039: E. Roscoe). NATAL: Durban (Smith, 1903); Umkomaas (N.M. 6373: H. C. Burnup; N.M. 6375: H. Falcon); Sezela (N.M. 459: Miss E. Chapman; N.M. 2097: M. Sweeney); Uvongo, juv. (N.M. B294: Mrs D. Smith); Port Shepstone (N.M. B885: H. Burnup); Shelley Beach (N.M. B886: R.K.). TRANSKEI: Mzamba, beach worn (in various private collections).

Remarks: Uncommon in Natal, but more or less worn shells do occur in beach drift.

Oliva sidelia Duclos, 1835

Oliva sidelia Duclos, 1835: pl. 19, figs 1,2; *idem*, 1844: 23: pl. 21, figs 1, 2; Dautzenberg, 1927: 114 *et sequ.* (references and synonymy); Burch & Burch, 1967: 518 (synonymy); Zeigler & Porreca, 1969: 80, pl. 10, figs 28–31. Type locality: 'Nouvelle-Guinée' (*vide* Duclos, 1844).
Oliva picta (? *non* Reeve, 1850); Smith, 1903: 363

Range: Polynesia and India to the Natal south coast.

Regional locality data: NORTHERN MOZAMBIQUE: Memba Bay, sandflats with *Thalassodendron* gravel or dead coral, 1–2 ft above L.S.T. (N.M. H4625–7, H4629: K. Grosch); Nacala Bay, sandflat at L.S.T. (N.M. H4631: K. Grosch);

Conducia Bay, sand above *Thalassodendron* or coral, or in soft sand, L.S.T. to 1 ft up (N.M. H4622–4, H5550, H4628, H4630, H4632, H4636: K. Grosch); Mozambique Bay; sand inside reef or above *Thalassodendron* at L.S.T. (N.M. H4633–4, H4637: K. Grosch); Lunga Bay, sandbanks above small corals or *Thalassodendron*, 2 ft above L.S.T. (N.M. H4635, H4638: K. Grosch). SOUTHERN MOZAMBIQUE: Bazaruto Is, sandflats (N.M. G4064, G3902; G3137: E. Roscoe); Santa Carolina Is, sandflats (N.M. 3922: E. Roscoe; G4052: R.K.); sandbank off Inhagonda (N.M. G3783: Mrs N. Cumming). NATAL: 3 miles off Umhlanga Rocks, 12–13 fath., on sand and shell (N.M. A280: R.K.); off Umhlanga Rocks, 12–14 fath. (N.M. A400: R. Cruickshank); Durban (N.M. 456: H. Burnup); Scottburgh (N.M. 6374: C. W. Alexander); Shelley Beach, near Port Shepstone (N.M. 5716: R.K.; A3766: Mrs R. Cock).

Remarks: This variable little species is not rare in southern Africa, but has previously been reported as *O. picta* Reeve, 1850. The true identity of the latter species remains to be established.

Oliva bulbosa (Röding, 1798)

Porphyria bulbosa Röding, 1798: 37 (type figures Martini, 1773: pl. 47, figs 507, 508, 'ex Mus. Boltieniano'). Type locality unknown.

Oliva bulbosa; Burch & Burch, 1967: 519 (synonymy); Zeigler & Porreca, 1969: 66, pl. 7, figs 1–6; Moura, 1976: 67, pl. 6, fig. 5a, b.

Oliva inflata Lamarck, 1811: 319; Dautzenberg, 1929: 371 (references and synonymy). Braga, 1952: 71, pl. 2, fig. 3; Moura, 1966: 44, pl. 6, fig. 4; *idem*, 1968: 42, pl. 8, figs 2, 2a; *idem*, 1969: 27, pl. 9, fig. 8; *idem*, 1970: 80, pl. 6, fig. 5. Type locality unknown.

Oliva inflata var *undata* Lamarck, 1811; Von Martens, 1879: 729.

Oliva inflata var *bicincta* Lamarck, 1811; Von Martens, 1879: 729; Moura, 1976: 67, pl. 6, fig. 6a, b.

Range: Indonesia and Red Sea to Mozambique, and possibly Natal.

Regional locality data: NORTHERN MOZAMBIQUE: Nacala Bay, sandbank near deep water (N.M. H4617: K. Grosch); Conducia Bay, sandflats, L.S.T. to 3 ft above (N.M. H4613–5, H4600–3, H4604–8, H4620–1: K. Grosch); Mozambique Bay, sandflat near deep water, 2 ft above L.S.T. (N.M. H4605: K. Grosch); Mozambique Is, sand above *Thalassodendron*, 2 ft above L.S.T. (N.M. H4604: Lunga Bay, sandbank near *Thalassodendron* (N.M. H4616: K. Grosch); between Lunga and Memba Bays (H4609–11 K. Grosch). SOUTHERN MOZAMBIQUE: Santa Carolina Is (N.M. G3680: Mrs N. Cumming); Magaruque Is (N.M. F5564: P. Elston); Bazaruto Archipelago (N.M. G1281: Mrs E. Roscoe); Inhassoro (N.M. G140–1, G8192: E. Roscoe); sandbank off Inhagondo (N.M. G2050: E. Roscoe); Maputo (Braga, 1952). UNCONFIRMED: 'Natal' (N.M. 449: H. C. Burnup and C. Upton); 'Ballito Bay', Umhlali district, Natal north coast (N.M. 6818: P. Elston). Fossil records (all Pleistocene of Mozambique): Messonta-Matibane, Inhaca Is, Vilanculos, Santa Carolina Is, Maputo (Moura, 1966–1976).

Remarks: While the presence in Natal of this abundant Mozambique species is perfectly likely, reliable confirmation is required. A Durban shell identified as *O. bulbosa* by Ponsonby or Sowerby is merely a broad *caroliniana*.

O. bulbosa is perhaps the only *Oliva* which possesses characters that are completely diagnostic, despite extreme variation in shape and colour. The broad basal callus of the columella pillar, crossed by a strong, angular ridge, brown-tinted and with a weaker one anteriorly, are unique characters within the genus. All the basic colour forms illustrated by Zeigler & Porreca, save for pure white examples, are represented amongst the Mozambique series.

Oliva caroliniana Duclos, 1835 (Fig. 2)

Oliva caroliniana Duclos, 1835: pl. 19, figs 5–8; Duclos, 1844: 21, pl. 21, figs 5–8; Marrat, 1870: 9, pl. 5, figs 73, 74; Burch & Burch, 1967: 515; Zeigler & Porreca, 1969: 68, pl. 7, fig. 13; Moura, 1976: 67, pl. 6, fig. 7a, b. Type locality: 'les Iles Carolines' (fide Duclos, 1844).
Oliva scitula Marrat, 1870: 9, pl. 6, fig 76, 77; Kalk & Macnae, 1958: 128. Type locality unknown.
Oliva dactyliola (non Duclos, 1835); Sowerby III, 1900: 3; Barnard, 1959: 60.

Range: Tanzania south to the eastern Transkei.

Regional locality data: NORTHERN MOZAMBIQUE: Porto Amelia (N.M. G3500: Mrs E. Roscoe); Memba Bay, sandbank near deep water, 1 ft above L.S.T. (N.M. H4646: K. Grosch); Nacala Bay, sandflat with *Thalassodendron*, 1 ft above L.S.T. (N.M. H4644, 4641: K. Grosch); Conducia Bay, soft or muddy sand, often above *Thalassodendron*, L.S.T. to 2 ft up (N.M. H4511, H4649, H4642, H4647, H4618–9: K. Grosch); Mozambique Bay, sandflat, 1 ft above L.S.T. (N.M. 4643: K. Grosch); Lunga Bay, sandflats, often with *Thalassodendron*, L.S.T. to 3 ft up (N.M. H4618–9, H4640, H4647). SOUTHERN MOZAMBIQUE: Santa Carolina Is. (N.M. G1290: Mrs E. Roscoe), 1 mile west of Santa Carolina Is, sand and *Thalassodendron*, dredged 4 ft at low tide (N.M. G7128: P. & E. Roscoe); Magaruque Is, sandbank (N.M. G2121: E. Roscoe), sandbank off Inhagondo (N.M. G3665: Mrs N. Cumming); Maputo, dead (N.M. 4717: R.K.); Inhaca Is (Kalk & Macnae, 1958). ZULULAND: Tugela Bank, 18 fath. (N.M. 9857: H. Champion). NATAL: 3–5 miles off Umhlanga Rocks, 15 fath., sand and shell (N.M. A322: R.K.), *do*, in 12–14 fath. (A388: R. Cruickshank), 3 miles off Umhlanga Rocks, 12–13 fath. (N.M. A276: R.K.). Durban littoral and dived (N.M. A2212: R. Cruickshank; N.M. 450–453, 6377: H. Burnup; N.M. 5386; R.K.); N.M. 4715: P. Elston; A3403: Mrs C. M. Connolly); off Durban Bluff, 27 m, coarse sand (N.M. A5900: C.S.I.R. Water Res.); Umkomaas littoral (N.M. 454, 6376: H. Burnup); Clansthal (N.M. 6379: H. Burnup); Shelley Beach, near Port Shepstone (N.M.: 6378: W. G. Rump); Trafalgar (N.M. A5581: Mrs M. B. McKay). TRANSKEI: Mzamba, beachworn (in various private collections); also 'Pondoland' (N.M. B884: A. Filmer). Fossil: Pleistocene of Bartholomew Diaz, Inhassoro area, southern Mozambique (Moura, 1976).

Remarks: It is likely that records from the Caroline Islands and Singapore (Burch & Burch, 1967) are erroneous, and that *O. caroliniana* is endemic to the south-western Indian Ocean. Turton's 1932 record of *O. scitula* from Port Alfred proves to have been based on a specimen of an American species given to him by a 'friend'!

Narrow examples of *O. caroliniana* can be confused with *O. oliva* (Linne, 1758), and broad ones with *O. bulbosa*. It differs from the former in the

posteriorly convex profile of the labium and from the latter in lacking the twin keels on the outer of columella base. It varies much in size, with extremes (presumed adults with thickened lips) of 43.0×22.4 mm and 23.1×11.1 mm. Natal specimens tend to be drab, with dense spotting and greyish-brown ground, while northern Mozambique shells generally have conspicuous markings on a pale ground, frequently with strong transverse bands or zigzag axial lines such as occur in *O. bulbosa*. *O. caroliniana* is by far the commonest South African *Oliva*, and may be dived for in a few metres in the Durban area.

Oliva tigrina Lamarck, 1811

Oliva tigrina Lamarck, 1811: 322 (type figure: Martini, 1773, pl. 45, fig. 475); Dautzenberg, 1927: 129 (references and synonymy); Burch & Burch 1967: 513; Zeigler & Porreca, 1969: 81, pl. 7, figs. 9–11. Type locality unknown.

Oliva elegans (non Lamarck, 1811); E. A. Smith, 1903: 363.

Range: Polynesia and East Africa to Mozambique and Natal.

Regional locality data: NORTHERN MOZAMBIQUE: Nacala Bay, sandbank near muddy *Thalassodendron* and small corals, 1 ft above L.S.T. (N.M. H4301: K. Grosch); Conducia Bay, sandbanks near *Thalassodendron*, 1–4 ft above L.S.T., also inshore in fine sand, 2 ft down (N.M. H4304–5, H4293–4, H4296, H4299, H4300: K. Grosch); Mozambique Bay, sandbank and muddy sand above *Thalassodendron*, L.S.T. (N.M. H4298, H4302: K. Grosch); Lunga Bay, drainage channel in sandflat, and sandbank with *Thalassodendron* and *Ulva*, 1 ft above L.S.T. (N.M. H4297, H4303: K. Grosch). SOUTHERN MOZAMBIQUE: Santa Carolina Is (N.M. F7061: Mrs K. Eastwood, caught on a baited fishing line; N.M. G3679: Mrs N. Cumming). NATAL: Durban (N.M. 457: H. Burnup).

Remarks: The single Durban shell is presumably the result of the settling of a 'stray' veliger as the normal southern limits of the species evidently lie well within Mozambique waters.

Oliva tremulina Lamarck, 1811

Oliva tremulina Lamarck, 1811: 310 (type figure: Lister, 1685–92: pl. 727, fig. 14; Weinkauff, 1877: 71, pl. 17, figs 1–8; Dautzenberg, 1927: 133 *et sequ.* (references and synonymy); Burch & Burch, 1967: 507; Zeigler & Porreca, 1969: 82, pl. 12, figs 1–6 (colour forms). Type locality unknown.

Range: New Caledonia and the Seychelles to southern Mozambique.

Regional locality data: NORTHERN MOZAMBIQUE: 'Mozambique' [= Mozambique Is] (von Martens, *vide* Weinkauff, 1877); Quirimba Is (N.M.: G3498: E. Roscoe); Memba Bay, on muddy coral shingle with *Thalassodendron*, inside reef at L.S.T. (N.M. H4306: K. Grosch); Conducia Bay, sandbank near *Thalassodendron*, sometimes muddy, sometimes near deep water, L.S.T. to 4 ft up (N.M. H4307–8: K. Grosch). SOUTHERN MOZAMBIQUE: Inhaca Is (N.M. G4736: C. Fernandes).

Remarks: The allied orange-mouthed *Oliva miniacea* Röding, 1798, seems to be chiefly Pacific in distribution, although records from the Indian Ocean islands do exist (cf. Dautzenberg, 1927: 31).

Oliva caerulea Röding, 1798

Porphyria caerulea Röding, 1798: 33 (type figure here restricted, Martini, 1773: pl. 48, fig. 518). Type locality unknown.

Oliva caerulea; Burch & Burch, 1967: 512.

Oliva episcopalis Lamarck, 1811: 313 (type figures: Lister, 1685–92: 719, fig. 3, and Gualtieri, 1742 pl. 23, fig. F). Type locality unknown.

Range: Indo-West Pacific to Natal.

Regional locality data: NORTHERN MOZAMBIQUE: Memba Bay, sandflat inside reef, 1 ft above L.S.T. (N.M. H4594: K. Grosch); Nacala Bay, sandflats above *Thalassodendron* or near deep water, 1 ft above L.S.T. (N.M. H4593, H4585: K. Grosch); Conducia Bay, sandflats and soft muddy sand above *Thalassodendron*, L.S.T. to 3 ft up (N.M. H4595, H4513, H4588, H4598, 4583: K. Grosch); Mozambique Is (N.M. G3445: A. Enes); Mozambique Bay, sandflats, sometimes above *Thalassodendron*, rocks or coral, 1–2 ft above L.S.T. (N.M. H4584, H4586, H4590, H4597: K. Grosch); Lunga Bay, sandflat near *Thalassodendron* 1 ft above L.S.T. (N.M. 4599, H4587: K. Grosch). NATAL: Durban, in sand, dived (N.M. 2797: P. Huebsch).

Remarks: Although there has been some resistance to utilisation of the earliest name, *Porphyria caerulea* Röding, 1798, its application seems obligatory, for the occasional use of the name over the years and its general application by a number of recent authors blocks recourse to the *nomen oblitum* rule. The argument that Röding's figure-references pertain to several species is not tenable, as most of Röding's contemporaries (including Linnaeus) were frequently guilty in this regard. Martini's Fig. 518 ('Das Kamelotchen'), although crude, clearly represents the species later described as *O. episcopalis*, and is here designated as type figure.

The form *atalina* Duclos, 1835, which has a white aperture, is not yet known from Mozambique.

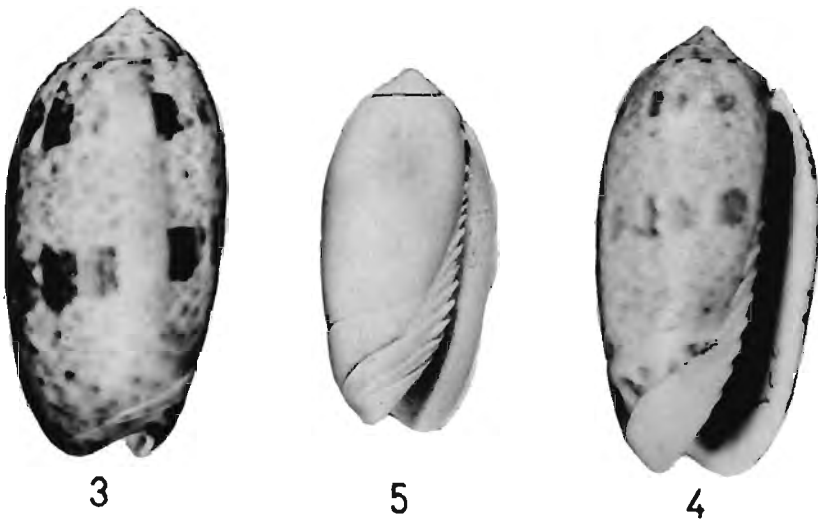
Oliva sairousa sp. n. (Figs 1, 3–7)

Diagnosis: Shell subcylindrical with narrow aperture: spire low, almost orthoconic, angle 82°–100°, glazed by translucent callus, exposing suture only on last 1,5 whorls; anal callus pad weak and declivous, sutures narrowly channelled; labium gently convex anteriorly only, crossed by 12–14 strong transverse ridges. Pale brown, suffused with grey, brown flecks and spots, columella base yellowish, aperture dark violet. Maximum length 37 mm.

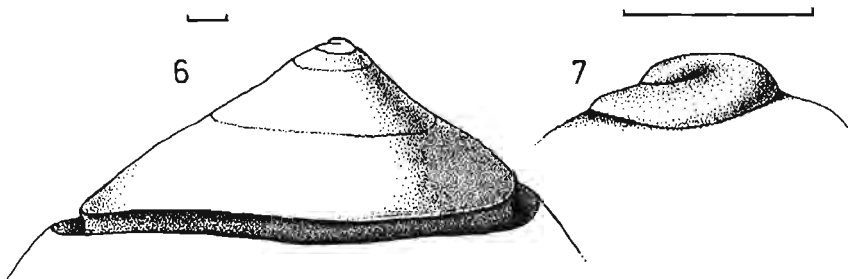
Description: Shell subcylindrical with gently convex body whorl, aperture rather narrow; spire low (aperture 0,81–0,84 of total length), acute, angle 82°–100°, almost orthoconic, glazed by a translucent callus deposit, which exposes suture only on the last 1,5 whorls, and forms a feeble suprasutural ridge which terminates next to the anal canal in a weak, sloping callus pad; sutures narrowly channelled. Labium almost straight posteriorly, anterior half gently convex; crossed by 12–14 well-developed transverse ridges, weakest posteriorly but extending almost as far back as anal notch, anteriorly often with weak intermediaries, columella pillar crossed by three ridges, with a weak fourth; no microshagreened sculpture is visible.



Figs 1-2. Radulae of *Oliva* species. 1. *O. sairousa* sp. n. 2. *O. caroliniana* Duclos. Scale = 0,1 mm.



Figs 3-5. *Oliva sairousa* sp. n. 3-4. holotype, 33,5 × 16,8 mm; 5. paratype, juvenile whitened with magnesium oxide, 28,5 × 14 mm.



Figs 6-7. 6. Spire of juvenile *Oliva sairousa* sp. n. 7. protoconch enlarged. Scales = 1 mm.

Ground colour pale brown, suffused with grey, and patterned with darker brown flecks and spots, with a series of small brown dots on the subsutural margin (about 12 on body whorl); two zones of squarish, dark brown spots may be present on body whorl; fasciole with a series of brown marks, base of columella tinged with yellow, interior of aperture deep violet.

Protoconch mammillated, narrowly domed; of just over 3 whorls, sutures deep; maximum breadth 1,2 mm, height 0,9 mm.

Dimensions: 33,5 × 16,8 mm (holotype); 37,3 × 17,3 mm (paratype).

Range: Known only from the Inhambane area of Mozambique, between approximately 23°20'S and 24°05'S.

Type material: Holotype, N.M. G9937/T2279, Baia dos Cocos, Jangamo district, leg. M. Lohr, August 1973. Paratypes 1–2, N.M. G2376/T2282, and paratype 3, G9937/T2280, radula slide 150, same data, Paratype 4, N.M. G1830/T2281, 10 fathoms off Mossongulo, near Massinga, leg. B. R. Stuckenberg, December 1973. Also four paratopotypes in coll. A. Jenner.

Remarks: In the present confused state of *Oliva* systematics, it is perhaps foolhardy to describe a new species. Yet study of the relevant monographs and comparison with the large *Oliva* collections of the British Museum (Natural History) and of the Liverpool Museum has revealed no fully comparable taxon. Indeed, the absence of further examples in large collections from northern Mozambique, from the Bazaruto Archipelago, and from Natal suggests that *O. sairousa* may even be endemic to the Inhambane area. Several experienced Mozambique collectors have never seen it.

Allied species are *O. caerulea* and *O. lignaria* Marrat, 1868. The characters separating *O. sairousa* from *O. caerulea* have been given in the key. *O. lignaria*—which sometimes closely resembles *sairousa* in spire-characters and has a similar protoconch—differs in its almost smooth labium, wider aperture and more elongate shape, and the columella bears traces of microscopic shagreened sculpture. *O. similis* Marrat, 1867, is also comparable, but three syntypes in the Liverpool Museum have finer labial pleats, a markedly coeloconic spire and a distinctively stronger anal callus pad.

Doubtful records

Oliva oliva (Linne, 1758) (= *Oliva ispidula* auct, non *Voluta ispidula* Linne, 1758): A small series labelled Durban (N.M. 5396) was received from a local amateur but the record has never been confirmed; moreover, no sign of the species has even been seen in Mozambique. A Durban shell identified by Ponsonby as '*ispidula*' is actually *O. caroliniana*. *O. oliva* is a common, widely-spread Indo-Pacific species that occurs on the East African coast at least as far south as Dar es Salaam.

Oliva vidua (Röding, 1798): a shell labelled Delagoa Bay (N.M. 4419), originally received from an amateur, is of doubtful provenance. No further Mozambique examples have come to light. Mozambique/Natal records of *O. elegans* Lamarck, 1811, a probable synonym of *O. vidua*, appear to be based on *O. bulbosa* and *O. tigrina*.

ACKNOWLEDGEMENTS

This study was supported in part by grants from the British Council and the Council for Scientific and Industrial Research. I also wish to thank Mrs Ruth Fregona for preparing the figures.

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Date received: 1 August 1979.